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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Yellowstone NATIONAL PARK

FILE NO.

MONTHLY REPORT

FOR

OCTOBER, 1921.

MONTHLY REPORT

1921

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November 10, 1921

Dear Sir:

The following is my report of Yellowstone National Park, and the operation of the Park, for the month of October, 1921:

GENERAL CONDITIONS:

The weather conditions during October were ideal, and nearly any out-door activities, such as touring, road construction, building, etc., could have been carried on without any special handicap on account of cold or storms. Travel through the park was discouraged and tourists were permitted to go through only by special authority, as our stations were not garrisoned and in most places we had no facilities for guarding formations and regulating traffic. Notwithstanding this, the total travel was considerable, as due to the fine weather those desiring to go through were frequent, and consideration was given to their requests whenever it was practicable to do so. This Service, as well as several of the park concessioners, took advantage of the splendid road and weather conditions to push forward improvement work planned for next spring, as will be shown under another heading further on in this report.

Weather

The weather was characterized by unusual warmth, sunshine, and little moisture, and was one of the finest Octobers on record. The enclosed monthly meteorological report, with the following notes on October weather conditions, both furnished by the Observer of the Weather Bureau office in the park, give the details of these conditions for this month:

General: The month was unusually warm and sunny, with but little precipitation.

Temperature: Monthly mean, 45.1°, is 3.6° above normal. The warmest October since the Weather Bureau record began in 1904, and with one exception, 1905, the highest monthly mean temperature dating back to 1887. The maximum temperature of 75° on the 3d is the highest since 1933 when 52° were recorded. No low temperatures were recorded, 30° on the 7th being the minimum.

Precipitation: Total, 0.56 inch, is 0.56 inch below normal. Pleasant weather with clear skies prevailed during the first half of the month, while during the last half, although mostly fair, occasional rain or snow occurred.

Snowfall: Total 8.0 inches, all of which fell on the 27th.

Wind: The wind movement was light and the maximum velocity of 30 miles on the 15th is, with two exceptions, the lowest maximum velocity in the October record.

Sunshine: Percentage of possible, 74, is the greatest of record for October. There were 17 clear days, which is the greatest number for October, and a greater number of clear days has been recorded but four times for all months during the period of record.

Travel

The road conditions throughout the park were ideal, and the only hindrance to traveling was the fact that all hotels and camps were closed, leaving no accommodations except with winter keepers or construction crews, and all usual summer activities in the park had been discontinued. For the reason that we had no facilities for accommodating travelers, or for enforcing regulations at the main points of interest as summer schedules had been discontinued, we discouraged traveling. Notwithstanding this, however, travel as shown by the enclosed Chief Ranger's report for October, 1936, was considerable. Copy of a similar report for October, 1921, is also enclosed for comparison, and the two are also compared in the following table:

Comparison of October Travel, 1920 and 1921

	Cars Entering	Carrying	Wheals	Total
October, 1920	65	210	12	222
October, 1921	185	519	22	581

The difference is readily explained by comparing the weather conditions, which were ideal during October, 1921, with practically no snow on any of the roads in the park, while the record for October, 1920, shows snow on the ground varying from 4.3 inches at Harvorth to 14.7 inches at the East Entrance.

Permits for private automobiles were sold at the park entrances up to and including October 9th. One motor-cycle and seventy-five automobile permits were sold up to this time, when the practice was discontinued for the summer, and travel permitted only on special permit after due consideration of the applicant and his needs.

Labor and Supply Market

There has been no recent change in the scale of wages paid to laborers and others in this vicinity. At this time of the year there is no demand for labor, as everything is in preparation for the inactive winter season, and men are being laid off from summer duties as fast as they can be spared.

But few supplies are needed, and many of those required are secured through the medium of the Chief Coordinator, under present regulations.

II. PERSONNEL:

Employees

On October 1st there were 154 employees of various classes on duty under this office, which had been decreased to 97 by October 31st.

The following list shows the number of employees of various classes serving under appointment during the month, with a statement in general of the kind of work in which they were engaged:

<u>No.</u>	<u>Class</u>	<u>Kind of work performed</u>
2	Asst. Engineers	In charge of engineering work in the park. (1 H.P.S. at large).
6	Clerks	1 Disbursing Agent and Purchasing Clerk; 1 on cost account work and

<u>No.</u>	<u>Class</u>	<u>Kind of work performed</u>
		property; 1 on time keeping; 1 on orders, proposals, and vouchers; 2 stenographer- typists on stenographic work, files, etc.; (1 on <i>General</i> without pay <i>March 1921</i>)
2	Electricians	Road meters, did necessary line work, and operated power plant regular shifts, including Sundays.
4	Foremen	1 in charge of stables at head- quarters; 1 in charge of road <i>Headquarters</i> sprinkling; 2 on road mainten- <i>road, bridge, computer</i> ance. 1 furloughed, effective October 9th.
1	Telegraph Operator	Sent and received all Government Eastern Union messages; operated one shift on telephone switchboard.
2	Telephone Switch- board Operators	Operated telephone switchboard, daily shifts, including Sundays. (1 on intermittent service only).
1	Master Mechanic	In charge of shops, and of re- pairs to heavy road machinery.
1	Blacksmith	General blacksmith work, includ- ing shoeing horses in shop, overhauling and repairing tools and equipment.
1	Master Painter	General shop work, including re- pairs to equipment and buildings at headquarters, also painting and placing of road signs.
1	Chief Lineman	In charge of power plant, tele- phone lines, and of maintenance crews on telephone lines.
4	Laborers	Wrecking, freighting and miscellan- eous work at headquarters. 2 appointed effective October 12, <i>Nov 11</i> 1921.
1	Handyman	Acting Steward and Master of Trans- portation.
1	Buffalo Keeper	In charge of tame buffalo herd.

No.	Class	Kind of work performed
2	Asst. Buffalo Keepers	1 assisting Buffalo Keeper; 1 in charge of hay ranch operations at Blough Creek.
1	Park Naturalist	Scientific research work and developing museum. On leave without pay since October 31st.
1	Master Plumber	In charge of general plumbing and water systems at public automobile camp, and of construction of plumbing system at new ranger station.
2	Automobile Mechanics	Repairing motor trucks and touring cars. 1 2nd of 11
1	Watchman	Made hourly patrols during night at headquarters and took care of office. 1 2nd of 11
1	Carpenter	Repairing buildings at headquarters.
1	Chief Park Ranger	In charge of ranger force. 1 2nd of 11
1	1st Asst. Chief Park Ranger	In charge of northern district.
2	Asst. Chief Park Rangers	1 in charge of southern district. 1 in charge of western district.
22	Park Rangers	In charge of ranger stations; directing traffic, motorcycle patrols, checking automobiles, and on duty in Chief Ranger's Office. 1 resigned, effective close October 31st; 5 appointed, effective Oct. 1; 1 October 5th, 1 October 12th. 1 W.A.R. taken up October 3, from Carlough since June 12th.
3	Temporary Park Rangers	Making patrols, directing traffic, checking automobiles. 2 discontinued during month. 2 appointed, effective October 5th and Oct 12th.

88 overlooked

Patrolmen paid
London, Tenn
Special Attorney
in general part

Make
Correction

Handled off
Patrolmen on duty

1 2nd of 11
1 2nd of 11

In addition to the regular employees listed above under appointment, the following were employed temporarily by the day:

	<u>On Oct. 1st</u>	<u>On October 31st</u>
Steam Shovel Operator	1	0
Painter	1	0
Plumber	1	1
Carpenters	1	5
Mechanics	10	5
Foreman	3	2
Cooks	7	2
Skilled Laborers	44	15
Laborers	11	3
4-Horse Teamsters	3	0
2-Horse Teamsters	10	1
	<u>92</u>	<u>36</u>
Appointments	<u>62</u>	<u>63</u>
	<u>154</u>	<u>99</u>

Leaves of Absence

During October, annual leaves of absence were granted as follows:

George T. Dushman	Clerk	1/2 day Oct. 15 (noon)
do	"	1/2 day Oct. 22 (noon)
Wendell M. Bishop	Park Ranger	1 day Oct. 20 (noon)-21 (noon)
Albert Collins	Electrician	1 day Oct. 25 (noon)-26 (noon)
Hans Larson	Park Ranger	6 days Oct. 24-29
Forest L. Carter	Park Ranger	5 " Oct. 1-6
Helen McHutt	Stenog-Typist	2 " Oct. 21-22
August C. Neumann	Master Painter	5 " Oct. 17-21
Harry A. Marshall	Auto. Mechanic	1 " Oct. 15-16
Hans Larson	Park Ranger	11 " Oct. 13-23
Erl A. Allen	Chief Lineman	6 " Oct. 12-19
Chester A. Lindsay	Asst. Supt.	12 " Oct. 13-27
Bob Roy Wadon	Park Ranger	1 " Oct. 11-11
Leroy Hill	Par. Agt & SDA	3 " Oct. 4-6 (S.L.)
John H. McDonald	Asst. Buffalo Keeper	8 1/2 days Oct 5 (noon)-16
Peter Lawson	Park Ranger	6 days Oct. 1-7
Carrie G. Hammecker	Stenog-Typist	1/2 day Oct. 1 (noon)-1
Chester A. Lindsay	Asst. Supt.	1 1/2 days Oct. 1 (noon)-3
Charlie R. Stinnett	Blacksmith	1/4 day Sept. 19-Oct. 1 (noon)
Milton F. Skinner	Park Naturalist	20 days Oct. 1-20
Milton F. Skinner	" "	Reg. Oct. 21 UNP
Chas. W. Deoch	Foreman	Furloughed Oct. 8, no pay

Resignations

Peter Lawson, Park Ranger, \$1200 p.a., resigned, effective close of October 7, 1921.

Hans Larson, Park Ranger, \$1200 p.a., resigned, effective close of October 31st, 1921.

Earl D. Glynn, Temporary Park Ranger, \$80 per mo., resigned, effective close of October 10th, 1921.

Appointments

Forest L. Carter)
Fred C. Finch) Park Rangers, \$1200 p.a., effective October 1,
Chester L. Butler) 1921, terminating temporary appointments.

Warren Hitchings, Assistant Buffalo Keeper, \$1200 p.a., effective Oct. 6, 1921.

Sam Cleveland, Laborer, \$1200 p.a., effective Oct. 12, 1921.

Floyd R. Marriott, Laborer, \$1200 p.a., effective Oct. 12, 1921.

William Behmhoff, Park Ranger, \$80 per mo., temporary, effective Oct. 6, 1921.

John A. Wells, Park Ranger, \$1200 per a., temporary, effective Oct. 12, 1921.

III. WORK COMPLETED:

(a). Construction of Physical Improvements

This is reported under IV.

(b). Maintenance and Repair of Physical Improvements.

Work completed under this heading is combined with work in progress, under IV.

(d). Service to the Public

Inasmuch as the regular tourist season closed Sept. 20th and there was no accommodation at hotels and camps, this feature was more or less curtailed. Our ranger force was also busy with winter duties, and information offices were closed. The few travelers who came through the park were given such attention as was practicable consistent with the duties in hand.

IV. WORK IN PROGRESS:

(a) Construction of Physical Improvements

The combined Ranger Stations and Community Centers in progress of construction at Old Faithful and Grand Canyon under contract with Merritt I. Tuttle were ninety per cent complete at the close of the month. The remaining work of chinking all log joints and apertures between logs will be completed in the spring of 1922.

Bridges

The crew in charge of Foreman E. T. White, building concrete bridges in the East Forest Reserve, did excellent work during the month. On October 4th the floor slab was poured on the thirty foot concrete bridge over Mormon Creek and the following day camp was moved to a location near Goff Creek and work began on the bridge over that stream.

The Goff Creek Bridge is the concrete T beam type, of twenty foot span. The footings for the abutments were carried down to a safe point below the bed of the stream. No trouble was experienced with water in the excavations as the stream is very low at this season of the year. The abutments and wings on the west side were poured October 21st and those on the east side October 25th. At the end of the month the forms for the T beams and floor slab were built and some of the reinforcing steel in place.

The railings on the Mormon Creek bridge were finished October 13th. The following material was used in constructing this bridge: five twenty-inch steel I beams, thirty-two feet long; 4528 pounds of reinforcing steel and 418 sacks of cement.

Sylvan Pass Fill

The crew under Foreman Wadson, who has been making a fill over the concrete bridge in Sylvan Pass, finished that work October 5th, and the next day dismantled for the season. Since the old log bridge has been removed and the fill made the general improvement in the appearance at this place is very noticeable. Next season, after the fill has settled, it is proposed to construct log railings along each side of the roadway to make the place more safe for tourists.

Dunraven Pass

The work which has been in progress during the season of widening and otherwise improving the road through Dunraven Pass was finished on October 2nd. The steam shovel, air compressor and other machinery were moved to a place in the pass where they will be safe from snow slides, and carefully covered to protect them from the weather. On October 3rd the camp was moved in to headquarters and the crew disbanded.

Since the completion of the job, the engineer's field notes have been computed, which determined the following quantities as final for the season's work:

17422 cubic yards of excavation of which 80% was solid rock
292 lin. ft. of 18" C.I. culvert pipe placed
68 " " " 24" C.I. " " "
50 " " " 12" C.I. " " "
155 " " " dry rock retaining wall built of an average height of 6 feet and an average thickness of 24 in.
15 square yards of hand placed rock slope.
Roadway widened a distance of 9100 feet.
9000 cubic yards of the excavating material was hauled an average distance of 200 feet and the remaining 8422 cubic yards was cast over.

The cost of excavating and hauling the material was found to be 61 cents per cubic yard.

The amount of work accomplished for the season on this job and the comparatively low cost per cubic yard is very pleasing, especially so, as it was necessary to keep the road open to travel at all times, causing considerable delay to the steam shovel and making necessary the clearing of the roadway after each blast which added considerable to the cost of the work.

Canyon Walls and Parapets

The crew that has been working at the Canyon the past season, building retaining walls and log parapets, completed their work on October 16th and disbanded.

In order to confine cars to the roadway and parking place at the Canyon store, 105 posts, 3 feet 6 inches high, were planted about 10 feet apart along the driveway and parking place. The space was then filled in with gravel, of which 55 cu. yds. were hauled. In addition to this, 900 lin. feet of log guard railing was built and 32 lin. feet of C.I. cul-

vert pipe placed.

Following is the amount of work accomplished by this crew for the entire season:

454 lin. feet of masonry retaining wall constructed, with
on average height of 10 feet and containing 763 perch.
2156 lin. feet of log guard railing
98 lin. feet 12" C.I. culvert pipe placed
66 " " 18" " " " " "

The plumbing work at Canyon was "roughed in" by our plumbing force, this work not being included under the contract.

(b) Maintenance and Repair of Physical Improvements

A new wooden approach 16 feet long was constructed at the east end of the steel bridge over the Yellowstone River on the Cooke City road. A new wooden bulkhead to retain the fill and guard railings were also built.

A few new planks were placed on the Lamar River bridge and many of the nuts on bolts and rods were tightened.

Survey

On October 20th, 21st and 22nd a survey was made to locate a road across the meadow between the Lake permanent Camp and the lake. The length of the proposed road is approximately 2400 feet. As the survey notes have not yet been worked up, the quantities and estimate of the cost of this road cannot be given at this time.

A survey was also made of an old abandoned log building at the Canyon, across the road from the Canyon Store, for the purpose of securing data for a plat to accompany a lease of this cabin to J. E. Haynes.

(c) Miscellaneous Improvement Work

The small force of painters employed under the direction of Master Painter Neumann during October completed the painting of the exterior of the employees' residences at Headquarters known as "non-commissioned Officers' Row", painted two motor-cycles, renovated the room to be used as a school room, and begun work on a small addition to the paint shop which is needed for use as a wash room for cleaning up automobiles, trucks and other vehicles and equipment before taking it into the paint rooms.

the small force employed under the Master Plumber roughed in the new plumbing at the Canyon, in the new community center and ranger station, drained several sets of quarters at Headquarters as they were vacated, made necessary repairs to the water and sewer system at Headquarters and made water and sewer connections and roughed in plumbing work in the frame building being remodeled into employees quarters.

A foreman and 1 teamster were employed at Headquarters corral, in charge of the stables, caring for necessary horses for use about Headquarters, hauling fuel to buildings, hauling garbage, and miscellaneous work. In addition to those, two men and a single team were employed under the same foreman, getting out a supply of wood and piling it on the road ready to be hauled next summer to the public automobile camp at Mammoth. Good progress was made, and this work will be continued during most of November.

Carpenter Shop: Two carpenters were employed during the month. The work accomplished consisted of remodeling shops and employees' quarters at Headquarters, and assisting in repairing the Lamar Bridge. The work at Headquarters consists of extensive changes in the shops, ceiling them and making tight partitions so the shops can be heated economically in winter, remodeling the interior of the old guard house for use as living quarters by two small families, and necessary changes in the quarters occupied by Disbursing Clerk Hill to install a concrete basement and hot water heating system. Good progress was made on these items, and considerable time was also given to making and installing suitable desks in the room set aside as a school room for use of the children of the community.

Blacksmith Shop: A blacksmith and helper were employed at Headquarters shoeing horses for the barn and rangers, making and repairing tools for the different shops, making heavy pins for the Buffalo Farm and hardware for the new ranger stations. They also repaired some of the old equipment brought in by the road crews during the fall. Repairs to trucks and passenger vehicles were made and a new storehouse for shop supplies was arranged nearer the shop where many of the supplies were moved and checked.

Garage: Two men were employed as mechanics in the garage during the month and repairs to trucks and passenger vehicles were made. The work of overhauling our motor transportation equipment was started with the tearing down of the two sprinckler trucks and the five ton White truck. All gasoline and oil used at Headquarters was issued at the garage and all issued were recorded.

The telephone system and power plant were maintained under direction of the Chief Lineman. Most of the heavy line repairs were discontinued, except for finishing up this work already begun about Headquarters, and the force was reduced to a winter basis.

The Power Plant was run continuously, including Sundays and nights, except for about 4 hours on two occasions on Sundays to enable the operators to clean out and change the oil in the switches, and generated a total during the month of 12,580 kilowatt hours of current. Of this, 2,210 was sold to park concessioners, 2350 used for lighting grounds at Headquarters, and the balance of 8,040 kilowatt hours was used in lighting government or wasted on transmission lines. The peak load during the month was 40 kilowatts, on October 16th at 9:00 o'clock P.M.

Number 2 Machine in the Power Plant was repaired by the operators, and put into operation on October 9th, after a rest as shown by the records since August 2, 1917. This machine was out of service on account of a crack in the turbine housing, a very large and expensive casting. Inquiries as to cost of a new casting indicated that it would cost about \$2,000 plus the freight charges from an eastern city. The repair was made at a total cost of not to exceed \$50 plus the work of the regular operators who have the time to spare while running the plant, and this saving was made through the ingenuity of Mr. W. H. Riley, one of our permanent mechanics who is deserving of special commendation for his skill and zeal in the interest of the Government. The work was done so cleverly and effectually that this particular machine has been running continuously ever since, as smoothly and efficiently as it ever did.

The office force was busy with routine work, including correspondence and filing, preparation of reports, vouchers and payments, etc. This work also included the preparation of reports of employees under "Job Description Schedule" required by the Bureau of Efficiency on its new Form No. 34. The correspondence was especially heavy during the month of October. 1,954 pieces of mail were received, and 1,618 sent out during that period.

The transportation and storehouse department were busy taking in and caring for property brought in from the field where it had been in use during the summer, and receiving and hauling several carloads of coal which is being delivered for winter use. Hay was also being delivered during October at the Madison Junction storehouse, preparatory for

next season, and this required the services of a man checking it up and piling it.

The rangers stationed at Riverside Station began the work of digging a well to supply the station with water which now has to be procured from the Madison River which is more or less contaminated, or hauled from the wells in West Yellowstone, 4 miles away. They went down 15 feet when they were obliged to postpone the work on account of the hunting season and necessity of their being constantly on the park lines patrolling.

The work of preparing for winter at all park stations which was nearly finished in September was completed, including hauling of supplies and equipment. A supply of skins was received for issue to rangers on winter stations.

The ranger force was rearranged as to station on a basis of winter patrols, and special attention was given to patrolling the park lines intensively at all points where hunting was likely to occur just outside on account of the open season in adjoining states. The weather was so mild, however, that there was no game animals of any consequence stirring, and hunters have had but little encouragement up to this date. This important work must be kept up and not neglected, however, as the weather is likely to change and the lines be beset by hunters at any time.

The regular employees at the buffalo ranch kept track of the time herd, and made general preparations for the winter. The teamster with 8-horse team worked until October 15th, and completed the disking of the meadow, covering about 170 acres. After this work was completed the regular employees reroseed this field, using about 155 lbs. of alsike clover mixed with about 750 lbs. of timothy seed.

Sanitation: Mr. A. F. Miller, Junior Assistant Sanitary Engineer, U.S. Public Health Service, remained in the park until October 25th, when he left for other fields where he is engaged during the winter. During October he completed plans for the proposed sewage disposal tank for Lake Hotel, checked the progress of the work of the Camps Company at Lake and Canyon, and made out some of his reports. His report on the inadequacy of the present system of supplying fresh milk and dairy products in the park to hotels and camps, and insanitary methods in existence in connection with the production of such products, is especially helpful and constructive, and furnishes an excellent basis for a complete reorganization of this extremely important public service.

Improvements by Park Utilities

The Yellowstone Park Hotel Company completed the addition to the log dining room at Old Faithful Inn, and also placed the floors in the old dining room and lobby at Old Faithful. This company also increased the size of the Engine Room at Old Faithful and will install an additional boiler, to take care of the increased space to be heated and lighted.

At Mammoth, the hotel company painted the buildings in rear of Mammoth Hotel, namely the general store, engineers storehouse, dormitory for women, and the print shop. This work was done under contract, using a painting machine run by compressed air. The work of this machine is not entirely successful from every standpoint, though it might do for roofs and rough work; but it uses much more paint than if the work were done by hand, and the results are not always so good. Colors used by the company were those designated by the National Park Service, namely gray body and light green roofs. The company's program has been discontinued for the winter.

The Yellowstone Park Transportation Company employed a small force of mechanics at Mammoth, overhauling its motor cars for next year.

The Yellowstone Park Canteen Company constructed additional tent cottages at Canyon, Lake, and Old Faithful Camps, and made some progress on the log amusement hall at Old Faithful. At Lake Camp the concrete toiletation bank 83'x26'x5' was completed, and the flush toilets were installed. About 800 feet of tile sewer was laid, the balance to be completed next spring.

Mr. S. A. Hamilton completed his work at Upper Basin for the present. His construction work at Lake on the new cottage for his employees progressed to the extent of putting on the siding and roof sheathing, and the work has been abandoned to be completed next year. Mr. Hamilton left the park on November 7th and his winter address will be at 119 Cherry Avenue, Long Beach, California.

Woodward Fryer and Brinkman, proprietors of the Park Curio Shop, closed up their Mammoth store on October 12th and left for the winter for California, where their address will be Los Angeles, 4576 S Figueroa Street.

V. WORK BEGUN:

The principal piece of work begun during October not noted in previous paragraphs was the log stable in connection with the new ranger station at Canyon. The plans and location of this building were approved by the Lexington Engineer on October 19th, 1921. The dimensions of the barn are 19x21, and during October the walls and foundation were completed, and the roof completed except for the laying of the shingles. These are to be procured and laid, interior done, and windows which are to be taken from the old station when it is torn down, put in next year. The work has been discontinued for the winter.

VI. PLANS ON PROPOSED WORK:

Plans for November contemplate the continuation of the work in progress, including special patrols on park lines, and particular attention to extermination of predatory animals by the ranger force; vaccination of calves for hemorrhagic septicemia at the Buffalo Ranch; continuation of the bridge construction work in the East Forest provided the weather will permit;

At Headquarters the shop force will be busy overhauling motor vehicles and equipment; the carpenters, plumbers and painters, remodeling and renovating buildings. The latter work includes a considerable amount of work on the shops themselves, completing the work already begun of bailing them for warmth; tearing out the toilets which are more extensive than necessary and badly located in the center of the building, and replacing them by a single toilet located in another part of the building where it will not interfere with the use of the balance of the building; and the biggest job of all which is to be attempted is to excavate for a boiler room, move two of the boilers from the old stone barracks, and install a steam heating system in the building. Most of this work can be done by the regular force, and much of the material can be reclaimed from buildings not in use. The expense is warranted in that it will greatly increase the efficiency of the whole shop force by having the building warm enough to work in comfortably during the severe winter weather.

The other extensive jobs of remodeling and renovating, namely the establishing of a hot water heating plant and basement in the quarters occupied by Mableburg Clark Hill, the remodeling and plumbing of the old guard house for quarters, and the renovating completely of the north end of the stone officers' quarters for occupancy by Chief Engineer Burney, will all go ahead as rapidly as time and securing of necessary

materials will permit.

With the exception of the work of the Transportation Company overhauling cars, the park concessions will probably have but little going on in the park.

VII. FENCIBLE. No changes are noted.

VIII. COST OF OPERATION.

The cost report for the month of October, which shows this date, is not completed, but will be forwarded as soon as practicable.

IX. OTHER MATTERS OF INTEREST:

Wild Animals

Antelope: A large number of our antelope herd has come into the Gardner Plate, as high as 200 having been seen there. They are scattered from there to the smaller ranges on Lewis, and are gradually moving in. They are all in splendid condition, and the present indications are that the increase is most satisfactory, although it is still too early to get a count of them and determine this point. An occasional antelope has been seen outside of the park along the north line, apparently having creviced through the fence or gone through the gate during the daytime.

Buffalo, tame herd: The new drift fence is working satisfactorily. While a few of the herd has managed to get around it and have appeared below it, most of them are still confined to the valley above it, as there is still plenty of good grazing there. Arrangements are being made to bring the cows with calves to the main ranch soon, in preparation for vaccinating the calves, of which there are 65 to be treated. The latest count of the herd gives the number at 500 animals.

Buffalo, wild herd: No effort has been made during October to locate this herd, as it is not wise to disturb them too often.

Beaver: The latest reports from park rangers who have been located in the best places to observe the beaver during the summer, indicate a slight increase in their number, and their condition is good. Small complaints of their depredations following the close of the tourist season have not been received.

and it was not necessary to discipline any of them during October. An effort on the part of Mr. Court Dawing, formerly a park ranger, to capture grizzlies for the City of St. Louis resulted in failure to procure the type of bears wanted, and he gave it up for the time being.

Elk: Due to warm weather, the elk are still ranging high and in small herds. Their condition is apparently good and the increase satisfactory, but this can be determined more accurately later, when they are driven down in larger herds by the winter storms.

Moose: These interesting animals are scattered in small numbers throughout the park, and are seen very frequently at different points. So far as we have been able to ascertain, 34 of these animals were killed by hunters in Wyoming in the Upper Yellowstone, under the special authority of the State of Wyoming to issue a limited number of permits. Our rangers stationed in the southeast corner of the park have kept in touch with this killing as closely as possible. It appears that these moose are very tame, having been in the park and protected so long as to be fearless, and they are usually killed at very close range. Scarcely any element of sportsmanship enters into the slaughter of wild animals under conditions of this sort.

One dead bull moose was found by Ranger Anderson on Blacktail Deer Creek. When found it had been so badly mutilated by coyotes that it was out of the question to determine how it was killed, but the probabilities are that it died a natural death. The horns will be saved for the museum.

Mountain Sheep: A few have been noted on Specimen Ridge and in the vicinity of Tower Falls, but they have not yet been seen near the winter quarters on Mt. Elberta.

Hunting

The hunting season which has been on for several weeks in the states adjoining the park, is proving most unsatisfactory from the standpoint of the hunters, which means that it is most satisfactory from the standpoint of the park and others interested in the preservation of game. Thus far, the weather has been so warm and pleasant that the animals are remaining high on their summer ranges, and most of the few hunters who went out in hopes storms would drive them down have gone home disappointed. In Montana, our closest

neighbor from the standpoint of hunting, the open season for elk is Oct. 15 to Nov. 15, while that for deer is Nov. 1 to 30 inclusive. The wonderful improvement in the game laws of this state from a protective standpoint is already apparent. The number of elk killed by hunters thus far is negligible: about 4 in the Slough Creek and Hellroaring country, and about 15 west of the park on the Madison and West Gallatin Rivers, is correct according to the best information obtainable at the present time.

Hunting has been discouraged so far as consistent to do so. The usual permits are issued to local residents who desire to make the trip to the famous duck shooting grounds at Lake Henry, ^{Idaho} ~~Utah~~, to bring back ducks taken within the State Laws, through the park on the regular highway, but they are counted and special permit issued to cover the number brought in. Requests for permits to bring big game meat and trophies through have been denied.

While the weather is still excellent and the prospects of hunters getting much game this fall are very remote, the usual vigilance along the park lines will be maintained so long as there is any danger from that source.

Predatory Animals: Preparations are being made to keep the number of mountain lions, wolves, and coyotes which prey on the other wild animals, down to the minimum. Park Ranger Henry Anderson who is especially adept at shooting and trapping, is detailed to confine his efforts principally to this work. It is also contemplated having Mr. Court Dewing, who was until recently employed as a park ranger, do considerable hunting for these animals within certain fixed boundaries.

Grazing: There is plenty of excellent forage throughout the park and so far there is no snow to prevent the animals from feeding where they will.

*to W-Land
S. Dewing*
Loose Stock: Twenty horses were taken up and impounded during the month of October. The laws governing impounding of stock were applied, and the owners are known and have been notified. Further reports will be made when the transactions are closed.

Fishes

A circular was issued prohibiting fishing in Madison River and tributaries after October 15th, in order to protect these waters where the big Loch Laven trout are spawning. Several requests for permits to visit remote parts of the park

for fishing were denied due to lack of facilities to supervise this sort of thing during the season when our rangers are needed elsewhere.

Fish secured from outside sources were planted in park waters on October 12, as follows:

- 2,500 Eastern Brook Trout fingerlings to Willow Park (Obsidian Creek)
4,000 Rainbow Trout Fingerlings to Virginia Meadows (Upper Gibbon River)

These fingerlings were donated to the park by the Montana State Hatchery at Biglart, Montana, and brought to the Park by Mr. W. T. Thompson, Supt. of the Federal Hatchery at Bozeman, Montana, on October 12th, when he came here for a conference relating to the building of a log hatchery at Fish Lake near Soda Butte. Plans were made to construct a hatchery there to take care of the eggs which can be collected every spring at that lake, the expense to be borne jointly by the Bureau of Fisheries and the National Park Service, the former furnishing the material necessary, except the logs which are to be cut on the ground, and the latter to do the necessary labor including moving of the necessary lumber, nails, shingles, etc., from the railroad to the site of the hatchery, and furnish labor to erect the building. The material was purchased and shipped, and has been hauled out and stored at Soda Butte Station to be held there until next spring when it is contemplated that we can erect the building, doing most of the work with our own men.

Birds

Several summer birds, including bluebirds and robins, are still seen. This is quite unusual, and is indicative of long-continued open weather.

Gauging Stations: Arrangements were made to have gauge readings made of the flow of Yellowstone River, by the park rangers at Lake, and by the winter keeper at Canyon Hotel.

Arrests and Violations of Law: No violation of law in the park was detected, and no arrests were made. Unusual activity among the State Game Wardens of Montana was noted, however, and three important arrests were known to have been made.

Forest Fires

No fires were reported in the park during the month, although it was unusually dry and the danger of fires is not en-

tirely past.

Fire at Headquarters: At 10:03 P.M., October 13th, our night-watchman, Mr. W. J. O'Loughlin, discovered a fire in the blacksmith shop compartment of the Transportation Company's big automobile repair shop about a hundred yards from our office. He acted very promptly giving the alarm to a few men who live close by, and with their aid proceeded to extinguish the fire with extinguishers. As soon as he had the fire under control, he sent one of the men to give the alarm, on the triangle located near the tennis court in front of the superintendent's residence. The sounding of the alarm on the triangle brought out but four men, which shows its inadequacy. Plans are being made to look up the subject of fire alarms, and secure something of this nature that would serve to give a general alarm in similar cases. Mr. O'Loughlin's prompt action and good judgment in this case is most commendable. Had this fire gained headway and gotten beyond control, it would have meant the loss of several buildings as well as probably every one of the big fleet of White automobiles used by the transportation company for park work. As it was, the fire did but little damage and was confined to a small room in the corner of the shop which is used by the blacksmith and his helper.

Accidents and Casualties

None reported during the month.

Sickness and Medical Service

Doctor W. E. Crawbuck continued his practice in the park during the month, under his special agreement with park employees. He reports that he made a total of 28 calls on government employees and their families under his contract, during October.

Natural Phenomena

No reports of changes in natural phenomena were noted.

Special Visitors

Among the prominent visitors to the park in September, the following are noted whose names were inadvertently omitted in making the September report:

Mr. A. D. Sheridan, President American Colortype Co., of Chicago, and wife, Sept. 12 to 13.

Mr. George B. McKibben, of Chicago, and wife. Mr. McKibben is a law partner of Hon. James W. Good, formerly chairman of the Appropriations Committee, U. S. House of Representatives, and a special friend of the park.

Surgeon General Hugh S. Cumming, U. S. Public Health Service, and wife, accompanied by his executive assistant Captain S. L. Christian, visited the park officially September 28 to October 1st. Special attention was given this party and they were entertained and shown the park without expense. The weather was excellent and they were delighted with the trip and the attention shown them.

Nov 27 for Address Club in plume class 5 Amsterdam Ave N.Y.C.
Mr. Edmund Heller, Naturalist, who entered the park in August, is still here.

Motion Pictures

No new permits were granted, nor did any motion picture operators work in the park during the month of October.

School

Arrangements were made for running a school for the education of the children whose parents are connected with the park service, and the school opened on October 19. The teacher, who is the wife of one of our employees, is paid by the parents of the children who attend. Due to the hardship of not having public funds available for running a school in the park, every encouragement and assistance practicable is given in this matter. An excellent room for the purpose is provided in the old frame building known as the Post Exchange. Fourteen children attended when the school opened, but this number will probably be reduced by two or three due to families of concessioners leaving for the winter. The teacher is a very competent one, and the school bids fair to be a most successful enterprise.

Miscellaneous

Religious Services: Two services were held in the chapel on Sunday, October 2, by Rev. J. F. Pritchard, Episcopal minister from Emigrant, Montana, and on October 16th by Rev. C. W. Neville, Field Missionary for the Montana English Lutheran Church.

Copies of Office Circulars numbers 21, 22, 23 and 24, issued during October, are enclosed herewith for your information.

2. RECEIPTS AND DISBURSURES:

The regular monthly report of revenues due, collected, and transmitted during the month of October, is enclosed. The total amount of money enclosed, as shown by this report is \$649.57, and is described as follows:

Draft No. 335, dated Oct. 11, 1931, drawn by the Cashier, Yogan Bros. Bank of Gardiner, Mont., on the National Bank of the Republic, Chicago, Ill., to your order, amount	\$ 50.00
Check No. 1431, dated Oct. 15, 1931, drawn by the Yellowstone Park Camps Company on the Northwestern National Bank of Livingston, Montana, to your order, amount	240.00
Check No. 3032, dated October 7, 1931, drawn by the Park Curio Shop on Yogan Bros., Bozeman, Gardiner, Mont., to your order, amount	7.32
Postal Money order No. 43145, dated October 11, 1931, drawn by the Postmaster at Yellowstone Park, Wyo., on the postmaster at Washington, D.C., to your order, amount	5.63
Voucher check No. 1335, dated October 12, 1931, drawn by the Yellowstone Park Transportation Company, Helena, Montana, on the National Bank of Montana, Helena, Montana, to your order, amount	106.57
Voucher check No. 977, dated Oct. 12, 1931, drawn by the Yellowstone Park Hotel Company on the National Bank of Montana, Helena, Montana, to your order, amount	153.10
Check No. 321, dated Oct. 11, 1931, drawn by Haynes Photo Studio on the First National Bank of St. Paul, Minn., to your order, amount	34.75
Check No. 1474, dated Oct. 20, 1931, drawn by Yellowstone Park Camps Co., on the Northwestern National Bank of Livingston, Mont., to your order, amount	52.60

Total amount, as shown by enclosed reports \$648.97

Acknowledgment of the receipt of the enclosed money is requested.

Cordially yours,



Chester A. Linnier,
Acting Superintendent.

The Director,
National Park Service,
Department of the Interior,
Washington, D. C.

CA:LJM

Enclosures.

2

November 4th, 1921.

MONTHLY REPORT OF OCTOBER

1 9 2 1

Superintendent H.M. Albright,
Yellowstone National Park,
Yellowstone Park, Wyo.

Dear Mr. Albright:

The following contains a brief report of the activities of the Ranger Force of the Yellowstone National Park, during the month of October, 1921. Many noticeable changes are listed:

General Conditions:

Unexcelled favorable weather conditions prevailed during the entire month, which was a material factor in the effective protection of the game. The hunting season of the State of Montana for elk opened October 15th, and will close November 15th; while open season for deer, visable horns only, opens November 1st. The protective measures adopted by the Montana legislature is by far of greater proportion than it has ever before attained. Its value is greatly increased in the fact that the State Game Commission has the power to close all hunting in any section of the state at any time when the extermination of any game animal prevails.

The State of Wyoming, at one time considered the Yellowstone's greatest friend to its animals, disregarded our suggestions and permitted the killing of fifty bull moose. Our records show that 24 of these animals were killed in the Upper Yellowstone district of the park and each of these animals were shot down at a range of less than 100 yards, showing their fearlessness brought on by years of protection. This has left a black spot on an enviable record.

The new ranger stations at the Grand Canyon and Upper Geyser Basin were completed up to date with the contract during the month. The chinking and interior finishing will be completed early in the month of May 1922. ✓

Park Ranger Sam T. Woodring has been engaged during the entire month overseeing the construction of the building and in cleaning refuse left by wood-cutters, and in making general repairs in preparation for the spring opening of the park. ✓

Plans were drawn up and approved for the construction of a new barn at the Canyon Ranger Station. This barn will accommodate four head of horses and will be ready for use during the next tourist season. ✓

Rangers at the Riverside Ranger Station began digging a much needed well at that station. They were down about 15 feet when the opening of hunting season interrupted their work. ✓

A crew under the direction of Master Plumber Wiggins was sent to the Upper Geyser Basin to make a thorough clean-up of the district.

The ranger force as a whole has completed all preparations for the winter months. Old stations and cabins have been repaired, winter wood stored at all snow-shoe cabins, and trails re-blazed where necessary. Ideal weather conditions have prevailed to make this work possible in every respect. ✓

All temporary rangers with the exception of Sam Hurless have been released from duty and their services terminated with the department. Earl D. Glynn, was released October 15th, who was the last temporary man carried during the month with the exception of Hurless, who will be carried until the end of the hunting season. ✓

The \$7.50 entrance fee was discontinued October 10th at all entrances except the southern entrance which passed all cars after September 26th. The final remittance for the season was made to the Director October 22nd. ✓

The travel data for the month is shown in another section of this report. ✓

General Conditions, Con't.

Tracking to all points in the park for the ranger department was completed before the close of the month. All stations are completely equipped for the winter.

Fifteen pair of new skis were received Oct. 29th and distributed to men needing this equipment. It is practically impossible to purchase skis for the rangers of a standard that meet with the approval of the entire force, and it is hereby recommended that skis be stricken from the list of articles furnished by the department, and that this money be allotted to some other division to the personal advantage of the men.

During the past few years the men have practically equipped themselves for this work in every respect, which of course allows us more credit with the disbursing department. Plans are being formed to use this money in such a way that it will be of advantage to both rangers and the service. The foundation of these plans will be submitted in our next report.

By order of Superintendent Albright, fishing in the Madison River and its tributaries was prohibited after October 15th. The procedure in this case follows that adopted during the fall of 1920, when the fishing in this river was prohibited for the first time. Better fishing during the tourist season was noticed thru this change of regulation.

Twenty horses were impounded during the month of October in the northern district. These horses were owned by the following local people who have been assessed \$1. per head impounding charge, and \$1 per head grazing charge per month:

Steve Elkins, Gardiner, 7 head	
(Charges paid,	\$21.00
Yellowstone Park Camps Co.,	
2 head, (Charges.....	\$ 6.00
Walter Shaw, Gardiner, 11 head	
(Charges,	\$21.20

In the case of Walter Shaw, four horses were impounded at headquarters and held there four days the charges of which amounted to \$7.20 and charges of \$14 on seven head for two months grazing is to be collected when the horses are claimed.

According to the regulations of the Department of the Interior, these horses will be sold Dec. 1, unless claimed.

Personnel.

Buffalo Herder Homer C. Fear, terminated his services with this department October 1st. His resignation was accepted on account of family difficulties.

Park Ranger Hans Larsen, tendered his resignation October 31st, effective that date and it has been recommended that it be accepted. His termination with this service was due to failing health.

Earl D. Glynn, temporary park ranger, terminated his services and was relieved from duty Oct. 10th. Glynn was held on duty at the Chief Ranger's office after the close of the tourist season.

Leaves of Absence.

Forest L. Carter, Soda Butte Station was granted leave from October 1 to October 6th. He had made arrangements to purchase several saddle horses in the Bear Creek country which made this leave necessary.

John W. McDonald, Ass't. Buffalo Keeper, was granted leave from October 6 to October 16th. He was relieved by John Bauman.

Park Ranger R.R. Wisdom, Sylvan Pass Station was granted one day leave October 11, to purchase winter supplies at Cody, Wyo.

Park Ranger Hans Larsen, Crevice Station, was granted sick leave from October 13th to October 23rd. His vacancy was left open during this period.

Park Ranger Wendell M. Bishop, Chief Ranger's Office, was granted one day leave October 20th, to attend to business matters outside of the park.

Park Ranger Hans Larsen, Crevice Station was granted leave from October 24th to October 29th, which was granted in connection with his sick leave.

Instructions.

Superintendent Albright gave instructions at this office not to grant leave to any member of the ranger force who was directly connected with work along any of the park lines, further: leave was not to be granted certain members of the force living near any of the boarding cities.

Personnel, Cont'.

Mr. William Dehnhoff, employed during the past summer at the Upper Slough Creek Hay Ranch was given a temporary ranger appointment and assigned to duty in the Slough Creek district. He entered on duty under this appointment October 6th and will be relieved from duty early next spring to take charge of the Upper Slough Creek ranch.

Mr. John Bauman, employed as a truck driver during the past summer was assigned to duty at the Grovice Station October 29th, pending his appointment as Park Ranger at \$100 per month, plus the increased compensation.

The resignation of Park Ranger Court B. Dewing was received and accepted, taking effect Oct. 1, which was tendered on account of failing health.

III. Work Completed.Station Work:Mammoth.

Park Ranger W.M. Bishop, in charge of Chief Ranger's Office, handling details, compiling statistics, and issuing supplies. Assisted until October 10th by Temporary Ranger Glynn.

Motorcycle Mechanic Leslie Longinger employed until October 15th repairing machines, and dismantling for the winter months. Two machines were taken to the Paint Shop for the Master Painter to re-paint.

Chief Ranger James McBride, inspecting park stations over entire park during the month. Everything in satisfactory condition.

Norris.

Station vacated October 1st for the winter.

Riverside.

Ass't. Chief Ranger E.T. Scovon, in charge of district, inspecting stations, laying out patrols, establishing camps, and preparing for the winter.

Park Ranger Roy T. Frazier, digging well, patrolling park line from station to Maple creek.

Work Completed. Cont'.
Station Work.

Riverside, Cont'.

Park Ranger Clifford Anderson. digging well, station repairs, patrolling west line from Maple creek to Grayling cabin. ✓

West Gallatin.

Park Ranger Calvin O. Davis. station duty, patrol along park line from Grayling Cabin to Snowslide. Reports hunter working thru park to Burnt Fork. ✓

Bechler River.

Park Ranger Raymond G. Little. station work, patrols to Buffalo Lake, to Cascade cabin and to Snake River station. One trip to Ashton, Ida. ✓

Park Ranger A.T. Bicknell. patrolling south and west boundary from Buffalo Lake to Cascade cabin. Repairs in district to trails and fords. One trip to Ashton, Ida. ✓

Snake River.

Park Ranger William H. Purdue. Rationing snowshoe cabins, patrol south boundary east and west. Station duty. ✓

Park Ranger Lee Cottrell. station duty, trip to Mammoth to take oath of office, patrols along south boundary, on leave to but horse. ✓

Lake.

Ass't. Chief Ranger Joe Douglas. in charge of district; patrols to Snake River, Upper Yellowstone, Frost lake and Mammoth. Inspecting stations, laying out patrols, preparing cabins for winter, etc. ✓

Park Ranger John A. Wells. patrols to Upper Yellowstone, Cold Creek, Frost Lake, Park Point and over entire district preparing for winter. ✓

Inther Custer. Park Ranger. station duty, to Upper Yellowstone. Preparing station and district for the winter. ✓

III Work Completed, Cont'.
Station Work.

Upper Yellowstone.

Park Ranger Earl S. Bowman, patrols along east park line checking bull moose and elk hunters, to Fox Creek, Bridger Lake, Park Point and Lake Station.

Park Ranger Chester L. Butler, patrols to Fâlean creek, Park Point, Lake Mammoth, and Eagle Pass.

Sylvan Pass.

Park Ranger R.R. Wisdom, on duty checking automobiles until October 10th, patrols to Jones Creek, Frost Lake; one day on leave.

Tower Falls.

Park Ranger James M. Dupuis, patrols in Hellroaring and Cottonwood districts. Making preparations for holding elk in northern district. No report.

Soda Butte.

Park Ranger George Winn, patrols along north and east boundary, to Miller and Cold Creek Cabins.

Park Ranger Forest L. Carter, on leave Oct. 1, to 6th, patrols to Mammoth, Lamar River, Miller Creek, Cache creek, Pebble Creek, Cold Creek.

Crevice.

Park Ranger Hans Larsen, patrols along north line in district and policeing station until October 8, at Mammoth rest of the month.

Park Ranger Fred C. Finch, patrol north park line from Bear creek to Crevice creek. Policeing station, and preparing for winter. Alone on station from 8th to October 30th.

John Bowman, laborer, assigned to station October 29th. On duty in district October 31st.

Gardiner.

Park Ranger Thad C. Pound, checking auto traffic and station duty, with short patrols watching antelope.

Park Ranger Al McLaughlin, checking autos, patrols to Bear Creek and to Reese creek. Established camp in the park on Reese Creek.

Work Completed. Cont'.
Station Work.

Slough Creek.

Park Ranger Ed Burkett, building small cabin at Upper Hay Ranch for quarters, patrolling along north park line. In camp along said line watching hunters.

Temp. Park Ranger William Dehnhoff, ranch work, patrols up Slough Creek, watching hunters in district. Encountered several questionable parties. ✓

Hellroaring.

Ass't. Chief Ranger Harry T. Rischman, on duty from October 17th in district preparing for winter. No report. ✓

Canyon.

Park Ranger Sam T. Woodring, under special detail during the entire month overseeing work in progress on improvements in the district. Engaged in extensive preparation for the next tourist season. ✓

West Yellowstone.

Temp. Park Ranger Sam Hurlless, checking automobiles and traffic until October 10th. Weighing hay, and on South Riverside patrol during remainder of month. ✓

Change of Policy:

Circulars.

The following circulars were issued during the month which affect the members of the Ranger Force:

Circular No. 22.

Rangers on duty in the park will not be permitted to keep at their stations chickens, cows, or other property that demands personal attention, unless it is demonstrated to the satisfaction of this office that such property can be cared for by parties other than the rangers themselves. There must be nothing in or about a ranger station that will prevent or tend to prevent long absence from said station on work of patrol.

This order goes into effect immediately and arrangements must be made at once for disposition of any property coming within the purview of this order, such disposition to be complete before November 1st.

Horace M. Albright,
Superintendent.

Circular No. 23.

It has come to my attention that some rangers are under the impression that Sunday Patrols are not required and that it has been customary for them to omit such patrols. I want it definitely understood that patrols on Sunday are necessary and that they are the most essential patrol of the week. Common sense should dictate that Sunday being a holiday would offer a most abundant opportunity for hunting in the park or otherwise violating the regulations should parties outside its boundaries intend to trespass within the park lines.

Hereafter, therefore, rangers will take care to be specially vigilant on Sunday and to make their usual patrols without fail. Inattention to this circular will be grounds for drastic action by me.

Horace M. Albright,
Superintendent.

Circular No. 20.

On and after Oct. 15, 1921, and until further notice, fishing in the Madison River and its tributaries is prohibited.

(Regulation permitting order follows.)

Horace M. Albright.

Change of Policy.

Permits.

The usual permits were issued to local people desiring to transport killed game birds from West-Yellowstone, Montana, to Gardiner, Mont. These parties were restricted to the lawful limit of the State of Montana, pertaining to the law relative to the possession of such animals.

Travel to interior sections of the park was limited after October 15th on account of the districts left unprotected and limited accommodation facilities. This will be almost entirely prohibited within a short time.

Permits to cut dead timber within the park lines were issued to the following people of Gardiner, Montana with instructions to remove all refuse as they gathered the wood and were limited to areas along the main highways:

R. H. Young,	4 loads.
Sam Larson,	2 loads.
Warren Hutchings,	2 loads.
Barney Elliott,	1 load.
Frank Dewing,	3 loads.

It has been determined to discontinue the policy of allowing National Park Service employees the privilege of hunting predatory animals at will. Permits will be issued to winter-keepers and the operator of the Cooke City Stage, Mr. Frank Lind. A special permit has been given to Park Ranger C.B. Dewing, (resigned) to trap predatory animals in the northern district from Black Tail to the West Line.

Following the practice established early in the spring of 1921, arrangements have been made to take readings at the gauging stations along the Yellowstone river. Park Ranger Custer, setting his stake near the Lake Outlet reported the first reading as 0.98. Mr. James Wilson will make the readings at the Canyon Station.

No permits were issued to big game hunters to bring big game meat thru the park. Several requests were received at the southern entrance and were denied. Four parties traveled thru a short section of the park on the trails accompanied by rangers. The request for this privilege is very seldom received.

Other Matters of General Interest.

Game.

In spite of a noticable shortage of men for protective purposes, the protection of the big game animals, so far this hunting season, has been every bit as successful as that of the 1920 season. The favorable weather conditions have been our greatest asset, combined with the fact that elk in the northern district are showing signs of the success of feeding hay at Slough Creek. Very few bands of the northern herd has gone beyond the Lower Slough Creek hay ranch. ✓

According to the best available reports, four elk have been killed in the Slough Creek and Hell-roaring districts, and it is an established fact that these animals have not been in the park during the entire summer. ✓

Conditions on the west line have been entirely satisfactory, in spite of the fact that about 15 elk have been killed so far this season. Four of this number could be counted as park elk. ✓

The hunting of deer has been an absolute failure so far this year. We do not know of any being killed along any of the park borders. Several does might have been killed had it not been for the law protecting them, but even this is doubtful.

The greatest disappointment of the season has been the opening of the bull moose season. Twenty-four of these animals were killed in the Upper Yellowstone district and the killing of these animals is clearly showing that our contentions were correct, when we claimed the bulls were not too numerous, as five and six cows can be seen running together which is, according to lovers of big game animals, a very unusual sight. With the killing of these moose, it brought many hunters to the district which resulted in the killing of many elk out of the southern herd. Under ordinary conditions, very few hunters work the Upper Yellowstone district, which has made both elk and moose extremely tame, and in turn resulted in the death of at least 100 per cent more elk than would have been killed had it not been for the open season on fifty bull moose. ✓

With the elk and moose, one excellent specimen of a mountain sheep ram was taken. In spite of the fact that there is a noticable shortage of mountain sheep in Wyoming, no effort has been made to protect them.

O.M.C.I.
Game.

Antelope.

One of the most noticable benefits from last year's mild winter lies in the increase of the antelope herd. More than two-hundred have been seen near Gardiner already this year, and small herds were seen during the last of the month at Slough Creek, the Buffalo Farm, on the Black Tail and high on Mount Everetts, indicating another mild winter as well as an increase. They are in excellent condition, especially the kids, which seem to be maturing rapidly. Many of the bucks have shed their horns and the new growth is already noticable.

These animals are ranging from Gardiner to Reese Creek, and a few have managed to crawl thru holes in the fence and have been seen in lower fields of local ranchers.

Buffalo. (Tame Herd)

The erection of the drift fence at the Buffalo Farm is proving a greater asset each day. Though some of the animals have managed to get around the fence, the main herd is under control at all times. Preparations are being made for the annual vaccination of the calves. Sixty-three of these animals are to be treated this year.

Sufficient hay to winter the herd thru the severest condition is available. Under ordinary conditions there will be several hundred ton of hay left over. One hundred and sixty acres of ground has been re-seeded for the herd. This seeding should make a noticable increase in the harvest next season.

Buffalo. (Wild Herd.)

No effort has been made to locate this herd. The indications point to an increase in the herd. They have not been counted this summer and no effort will be made to check on them until earl spring.

Birds.

Black-birds, robins, blue birds, camp robbers, and several other species are in the northern distasts, substantiateing the belief of an excellent winter from the game standpoint.

O.K.G.I.
Game.

Bears.

Reports of bear in all sections of the park are numerous. So far this fall there have been no reports of these animals damaging any of the property of the concessioners in the interior of the park. None were killed during the month.

An effort was made by Court B. Dewing, an excellent trapper, to catch several grizzlies for scientific purposes. He was unsuccessful, as he began his work late in the season when most of this specie were rangeing high in the mountains. It is to be recommended that this permit be cancelled.

Contrary to the reports of our Park Naturalist, rangers in direct contact with the bear situation report an increase and that the report of only forty of these animals being in the park is unjust and incorrect.

They are preparing to hibernate but remain numerous at the dumps and around the hotels and camps.

Elk.

We have no fear for the safety of these animals. They are feeding high, moving in small bands, and have shown no inclination to gather in the low sections of the park. Grazing conditions are excellent, the animals are in excellent condition, showing no signs of their 1919 set-back. Though they can not be seen in such large herds as is desired by the officials of the park, we are not anxious about the numbers of the herds, they are caring for themselves.

False reports have been published already this season about the number of elk to be seen in the park, but poor hunting reports have added greatly to public opinion in this respect. Instructions have been sent to all rangers to refuse to give out any information relative to the number of elk, deer or moose in the park.

Every possible effort will be made this winter to hold the elk within the park. Plans are being made to block every game pass, and mounted men will keep constant check on the activities of the numerous herds.

O.M.G.I.
Game.

Moose.

Moose can be seen in every district of the park, not in large numbers, but stray animals and small bands are seen daily by patrolling rangers, some in sections where here-to-for moose had never been know to feed.

One dead bull was found by Park Ranger Henry Anderson in a boggy section on the Black Tail. He reported finding the animal after it had been torn to pieces by coyotes. He was ordered to recover the head and send same to headquarters for the museum.

The moose of the Upper Yellowstone district have been driven out of the district, which possibly accounts for their scattered condition in the park. Rangers stationed at the Upper Yellowstone Station were given instructions to scare as many of these animals in the park as possible and their efforts prevented greater slaughter. Many unsportsmanlike tricks were used to kill these animals, such as the decoy, whistles, and above all, they were all pot shot at close range.

The moose of the northern, southern and western districts were unmolested, game laws protecting them until 1925.

Predatory Animals.

The predatory animals question has given cause for much debate. Adverse criticisms are common of our efforts to keep their numbers reduced.

Park Ranger Henry Anderson has been on duty during the entire month engaged in hunting these animals. He has established camps at convenient intervals, strung trap lines and located his runs. He killed more than 15 coyotes and one wolf during the month.

Court B. Dewing will spend considerable time this winter in this work. He plans to trap the northern district for the fur obtained. His district will lie from the Black Tail range to the West line.

Park Ranger Henry Anderson will have the upper section of the northern district for his hunting and trapping area.

O.M.G.I.**Accidents.**

There were no accidents during the month of October. Several men of the Ranger Force were off duty several days on account of sickness, which was not serious except in the case of Larsen, which resulted in his resignation.

Arrests.

No arrests were made during the month by any member of the Ranger Force but several arrests of great importance were made by Game Wardens outside of the park.

Two hunters were arrested near West Yellowstone, Montana for killing elk out of season. This is the first arrest of this kind in the western district during the past three years.

Game Wardens working in the vicinity of Tom Minor Basin arrested J. Ferrill for killing Mountain sheep, trapping beaver and filed several other charges against him.

In both cases drastic action was taken, which resulted in considerable publicity and decreased the likelihood of any game law violations.

Trapping.

Trapping will not be as extensive this year as it has been during the past two years. A great decrease was noted during the 1920-21 season, which is even more noticable this year. None of the trapper in any of the districts have laid out their lines.

Travel.

Our travel records for the 1921 tourist season closed September 26th, with 81,651 visitors, but in addition to these figures, there were 581 visitors to the park during the month of October, bringing the total visitors for the year to 82,232 people, and 183 automobiles, bringing the total to 15,919. The travel for October 1920 was 65 automobiles and 222 visitors, an increase of 120 cars and 359 people.

Respectfully submitted,

Wendell M. Bishop,
For the Chief Ranger.

November 5, 1921, 1921.

Brief Outline of Work accomplished during the month of

October by the Sanitary Division.

Washed H. Co. Bow October 15th

Washed painting motor cycles No. 57 & 58

Washed ^{Halls} & furnished woodwork, also shellac & furnished desks in school room.

Started work on new addition to paint shop, concrete foundation, pit & floor. Expect to complete Nov. 15!

H. Co. Neumann.

Fill out briefly and return to Mr. Lindsley before the 5th of the following month. Data needed for monthly report.

Report of Power Plant for the month of October

1921

Total Generated. 12580

Sold to Concessionors 2210

Street Lighting 2330 4540

Government Buildings 8040

Peak Load. 10/16 9 PM 40

During the month
of October no line
work was done.

#2 Machine in the
power plant was ^{repaired} and
out in operation on
the 9th and has been
running since without an
interruption.

This machine was out
of service on account of
crack in the turbine
housing and the last
record of its running was
Aug 9-1917. <sup>The repairing of the machine was
made at an expense of less than \$100.
New casting would have cost more.</sup>
The plant was shut ^{down} on the
even on two Sundays for
about 4 hrs each to enable
to clean and change oil in
engine.

E H Allen

October 15, 1921

Memorandum for Files &
Copy to Mr. Lindsley:

With reference to the enclosed report of Night Watchman O'Laughlin in regard to the fire at the Transportation Company's shops, I wish to amplify the same by the following statement:

The fire occurred as Mr. O'Laughlin has states but it should be explained that the building effected was the shops building and not the storage garage. Mr. O'Laughlin had to act very quickly and had no opportunity to sound the fire gong for the purpose of arousing government employees. When the fire was nearly out he was able to spare a man to sound the alarm which brought Mr. Burney, Mr. Brant, Mr. Miller and myself out of our homes and Mr. Brant went at once to the switch-board. By the time I could reach the scene of the fire it was wholly extinguished and Watchman O'Laughlin was returning to the office.

The fact that the fire gong did not awaken anybody beyond Mr. Burney's house and was not heard by people at the Western part of the settlement here indicates that it is wholly insufficient for its purposes. It seems to me that it is entirely possible for a fire to break out in this place, have the gong sounded and still not arouse but a few of our people after they have gone to bed and asleep.

Horace M. Albright,
Superintendent.

Mr. Lindsley

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

Yellowstone Park, Wyo.

WEATHER CONDITIONS--MAMMOTH HOT SPRINGS.

O C T O B E R, 1921.

(Copy in Form similar to Sept. report same subject)

General: The month was unusually warm and sunshiny, with but little precipitation.

Temperature: Monthly mean, 45.1° , is 3.6° above normal. The warmest October since the Weather Bureau record began in 1904, and with one exception, 1903, the highest monthly mean temperature dating back to 1887. The maximum temperature of 75° on the 3d is the highest since 1893 when 82° were recorded. No low temperatures were recorded, 20° on the 7th being the minimum.

Precipitation: Total, 0.56 inch, is 0.58 inch below normal. Pleasant weather with clear skies prevailed during the first half of the month, while during the last half, although mostly fair, occasional rain or snow occurred.

Snowfall: Total 5.0 inches, all of which fell on the 27th.

Wind: The wind movement was light and the maximum velocity of 28 miles on the 15th is, with two exceptions, the lowest maximum velocity in the October record.

Sunshine: Percentage of possible, 78, is the greatest of record for October. There were 17 clear days, which is the greatest number for October, and a greater number of clear days has been recorded but four times for all months during the period of record.

E. H. Fletcher,
Observer.